620-1, 620-2, . . . 620-N according to the specific spin reel profile for each spin reel. CPU **605** downloads the data as needed in real time according to the scenarios associated with the game play in the game or game mode operating at the current time.

[0046] In an embodiment, a gaming machine and methods for operating the game machine use a stepper motor in which the calculation of the delay values is performed in real time as opposed to ahead of time. Given a current velocity and knowledge of a desired velocity status in some period of time, each step to get from the current velocity to the desired velocity is linearly interpolated. In an embodiment a digital signal processor which operates as a very fast microprocessor is used to make these linear interpolation calculations in real time, while the motor is stepping. The digital signal processor may issue a step to reel driver and, then, for the period for the next step, it would calculate how long it would have to delay. As the digital signal processor controls the application of the delay, once the next step is issued, the digital signal processor calculates the next delay and so on. In this manner, the digital signal processor controls spin reel motion according to each linear segment representing a spin profile.

[0047] Although specific embodiments have been illustrated and described herein, it will be appreciated by those of ordinary skill in the art that any arrangement that is calculated to achieve the same purpose may be substituted for the specific embodiments shown. This application is intended to cover any adaptations or variations of the present invention. It is to be understood that the above description is intended to be illustrative, and not restrictive, and that the phraseology or terminology employed herein is for the purpose of description and not of limitation. Combinations of the above embodiments, and other embodiments, will be apparent to those of skill in the art upon studying the above description. The scope of the present invention includes any other applications in which the above structures and fabrication methods are used. The scope of the present invention should be determined with reference to the appended claims, along with the full scope of equivalents to which such claims are entitled.

What is claimed is:

1. A gaming machine comprising:

a reel controller;

a reel; and

a reel driver responsive to the reel controller to drive the reel based on motion parameters assigned to a time period associated with a spin profile for the reel.

2. The gaming machine of claim 1, wherein the reel controller is adapted to provide a set of paired motion parameters, each paired motion parameter correlated to one of a set of time periods.

3. The gaming machine of claim 2, wherein the paired motion parameters include a velocity for each time period.

4. The gaming machine of claim 2, wherein the paired motion parameters include a constant acceleration.

5. The gaming machine of claim 1, wherein the motion parameters are mapped to line segments that approximate the spin profile for the reel.

6. The gaming machine of claim 1, wherein the reel controller uses dynamically provided motion parameters.

7. The gaming machine of claim 1, wherein the gaming machine further includes a plurality of reels, each reel driven by one of a plurality of reel drivers, each reel driver responsive to the reel controller.

8. The gaming machine of claim 7, wherein each plurality of reel drivers is associated with a set of paired motion parameters.

9. The gaming machine of claim 8, wherein the set of paired motion parameters for each reel driver is independent of the set of paired motion parameters of the other reel drivers of the plurality of reel drivers.

10. A gaming machine comprising:

a reel controller;

a reel; and

a reel driver responsive to the reel controller to drive the reel based on motion parameters assigned to a time period associated with a spin profile for the reel;

a processor;

a memory coupled to the processor via a data bus, wherein information regarding the motion parameters are provided to the reel controller using the data bus.

11. The gaming machine of claim 10, wherein the reel controller is coupled to the data bus by a peripheral bus.

12. The gaming machine of claim 10, wherein the motion parameters are processed using the processor and memory.

13. The gaming machine of claim 10, wherein the memory stores motion parameters associated with a number of games.

14. The gaming machine of claim 10, wherein the processor calculates the motion parameters in real time.

15. The gaming machine of claim 10, wherein the reel controller uses the motion parameters to linearly interpolate velocities to approximate the spin profile.

16. A method comprising:

providing a set of motion parameters in a reel controller of a gaming machine;

driving a reel based on the set of motion parameters, wherein the set of motion parameters are associated with a spin profile for the reel and a curve that approximates the spin profile.

17. The method of claim 16, wherein the method further includes calculating the set of motion parameters using a processor.

18. The method of claim 16, wherein the method further includes calculating the set of motion parameters in the reel controller.

19. The method of claim 16, wherein providing a set of motion parameters includes providing a basis for calculating the set of motion parameters for each game associated with the gaming machine.

20. The method of claim 16, wherein providing a set of motion parameters includes calculating the set of motion parameters in real time.

21. The method of claim 16, wherein providing a set of motion parameters includes providing a set of motion parameters that defines line segments as the curve that approximates the spin profile for the reel.

22. The method of claim 21, wherein providing the set of motion parameters that defines line segments that approximate the spin profile for the reel includes reading initial motion parameters from a memory.